

WHAT IS CLAIMED IS:

1. A method for forming a conductive template, the method comprising:
providing a substrate;
forming a mesa on the substrate; and
forming a plurality of recessions and projections on the mesa with a nadir of the recessions comprising electrically conductive material and the projections comprising electrically insulative material.
2. The method as recited in claim 1 wherein the mesa is substantially transparent to a predetermined wavelength of radiation.
3. The method as recited in claim 1 wherein forming further includes fabricating a plurality of spaced-apart electrically conductive region on the mesa.
4. The method as recited in claim 1 wherein forming the plurality of recessions further includes depositing a layer of conductive material on the substrate and depositing a layer of insulative material on the layer of conductive material; and patterning the insulative layer to form said plurality of recessions, with said plurality of projections extending from a surface of the substrate.
5. The method as recited in claim 1 wherein forming the plurality of recessions further includes depositing a layer indium tin oxide on the substrate and depositing a layer of insulative material on the layer of indium tin oxide.

6. The method as recited in claim 1 wherein forming the plurality of recessions further includes forming a plurality of spaced apart conductive regions on the substrate, with regions of the substrate not in superimposition with the spaced-apart conductive regions being exposed, defining exposed regions, and forming, on the exposed regions, electrically insulative material, with the electrically insulative material and the conductive regions forming a patterned layer having a plurality of vias.

7. The method as recited in claim 1 wherein forming further includes depositing a layer of patterning material on the template and patterning the patterning material to expose regions of the substrate disposed, defining a patterned layer, depositing a layer of conductive material on the patterned layer, and removing the patterned layer, thereby leaving a plurality of spaced-apart electrically conductive regions on the mesa and covering the plurality of spaced-apart electrically conductive regions with an electrically insulative layer and patterning the layer to expose the plurality of spaced-apart electrically conductive regions.

8. The method as recited in claim 1 wherein providing further includes forming the substrate from a material selected from a set of materials consisting essentially of quartz, fused-silica, silicon, sapphire, organic polymers, siloxane polymers, borosilicate glass, fluorocarbon polymers, and metal.

9. The method as recited in claim 8 wherein the mesa allows ultraviolet radiation to propagate therethrough.

10. A method for forming a conductive template, the method comprising:

providing a substrate;

forming a mesa on the substrate, with the mesa consisting of material that is substantially transparent to a predetermined wavelength of radiation;

forming a plurality of recessions and projections on the mesa with a nadir of a subset of the recessions including electrically conductive material to form a plurality of electrical conductive regions.

11. The method as recited in claim 10 wherein forming the plurality of recessions further includes forming the plurality of recessions from depositing a layer of indium tin oxide on the substrate, followed by depositing a layer insulative material on the layer on indium tin oxide.

12. The method as recited in claim 10 wherein forming the plurality of recessions further includes providing the plurality of electrically conducting regions to be selectively activated.

13. The method as recited in claim 10 wherein forming the plurality of recessions further includes depositing a layer of conductive material on the substrate and depositing a layer of insulative material on the layer of conductive material; and patterning the insulative layer to form a plurality of vias therein

extending from a surface of the insulative layer and terminating in the layer of conductive material.

14. The method as recited in claim 10 wherein forming the plurality of recessions further includes forming a plurality of spaced apart conductive regions on the substrate, with regions of the substrate not in superimposition with the spaced-apart conductive regions being exposed, defining exposed regions, and forming, on the exposed regions, electrically insulative material, with the electrically insulative material and the conductive regions forming a patterned layer having a plurality of vias.

15. The method as recited in claim 10 wherein providing further includes forming the substrate from a material selected from a set of materials consisting essentially of quartz, fused-silica, silicon, sapphire, organic polymers, siloxane polymers, borosilicate glass, fluorocarbon polymers, and metal.

16. A method for forming a conductive template, the method comprising:
providing a substrate;
forming a plurality of recessions and projections on the substrate with a nadir of a subset of the recessions including electrically conductive material to form a plurality of electrically conductive regions by depositing a plurality of spaced-apart conductive regions on the substrate, followed by depositing a layer insulative material on the layer on plurality of electrically conductive regions.

17. The method as recited in claim 16 wherein forming the plurality of recessions further includes providing the plurality of electrically conducting regions to be selectively activated.

18. The method as recited in claim 16 wherein forming the plurality of recessions further includes depositing the layer of indium tin oxide on the substrate and depositing a layer of insulative material on the layer of indium tin oxide; and patterning the insulative layer to form a plurality of vias therein extending from a surface of the insulative layer and terminating in the layer of indium tin oxide.

19. The method as recited in claim 16 wherein forming the plurality of recessions further includes forming the layer of indium tin oxide as a plurality of spaced apart conductive regions on the substrate, with regions of the substrate not in superimposition with the spaced-apart conductive regions being exposed, defining exposed regions, and forming, on the exposed regions, electrically insulative material, with the electrically insulative material and the conductive regions forming a patterned layer having a plurality of vias.

20. The method as recited in claim 16 wherein providing further includes forming the substrate from a material selected from a set of materials consisting essentially of quartz, fused-silica, silicon, sapphire, organic polymers, siloxane polymers, borosilicate glass, fluorocarbon polymers, and metal.

21. A template, comprising:

a substrate; and

a plurality of spaced-apart electrically conductive regions disposed on the substrate, with the substrate and the electrically conductive regions both being substantially transparent to a predetermined wavelength of energy.

22. The template as recited in claim 21 wherein said predetermined wavelength of energy is ultra-violet radiation.

23. The template as recited in claim 21 where said substrate further includes a mesa, with a subset of said plurality of spaced-apart electrically conductive regions are disposed on said mesa.

24. The template as recited in claim 21 wherein said substrate is formed from fused-silica.

25. The template as recited in claim 21 wherein said plurality of spaced-apart conductive regions are formed from Indium Tin Oxide.

26. The template as recited in claim 21 further including a power supply connected to a subset of said plurality of spaced-apart conductive regions.

27. The template as recited in claim 26 further including a processor connected to said power supply to direct the operation thereof to apply electrical energy so said plurality of spaced-apart electrically conductive regions in a predetermined manner.

28. The template as recited in claim 26 further including a processor connected to said power supply to direct the operation thereof to apply electrical energy so said plurality of spaced-apart electrically conductive regions to sequentially apply electrical energy thereto.

27. The template as recited in claim 23 wherein said subset further includes all of said plurality of spaced-apart electrically conductive regions.

28. A method of creating a pattern on a body, said method comprising:

arranging a liquid to be between a template and said body;

orientating said template proximate to said liquid; and

applying an electrical field between said template and said body move a portion of said liquid to avoid to spread said liquid over said body to form a film, while preventing discontinuities in said film.

29. The method as recited in claim 28 wherein applying further includes applying an electric field of sufficient magnitude to overcome capillary forces of said liquid between said template and said body.

30. The method as recited in claim 28 further including providing said template with an electrically conductive layer that is transparent to radiation that causes said liquid material to polymerize and cross-link

and, with applying said electric field further including applying a voltage to said conductive layer.

31. The method as recited in claim 30 further including forming said template from fused-silica and including an electrically conductive layer that is transparent to radiation that causes said liquid material to polymerize and cross-link and, with applying said electric field further including applying a voltage to said conductive layer.

32. The method as recited in claim 31 wherein said radiation includes ultra-violet light.

33. The method as recited in claim 30 wherein providing further includes providing said template with a said electrically conductive layer that is contiguous in a region in superimposition with said liquid.

34. The method as recited in claim 33 wherein providing further includes providing said template with a plurality of spaced apart electrically conductive layers in a region in superimposition with said liquid.

35. The method as recited in claim 33 wherein providing further includes providing said template with a plurality of spaced apart electrically conductive layers in a region in superimposition with said liquid and consecutively applying a voltage to a subset of said plurality of spaced-apart electrically conductive layers.

36. The method as recited in claim 33 wherein providing further includes providing said template with a

plurality of spaced apart electrically conductive layers and concurrently applying a common voltage level to a subset of said plurality of electrically conductive layers.

37. The method as recited in claim 33 wherein providing further includes providing said template with a plurality of spaced apart electrically conductive layers and concurrently applying differing voltage levels to a subset of said plurality of electrically conductive layers.